

2023

FY

COMPREHENSIVE MAINTENANCE

PLAN



MONTGOMERY COUNTY PUBLIC SCHOOLS
Department of Facilities Management
DIVISION OF MAINTENANCE AND OPERATIONS

EXECUTIVE SUMMARY

The Division of Maintenance and Operations and its Central M&O Service Center are headquartered in Gaithersburg, Maryland.



A WELL-DESIGNED AND IMPLEMENTED FACILITIES MAINTENANCE PROGRAM

is a vital component of the educational program of Montgomery County Public Schools (MCPS). Maintaining our school buildings is not only critical to ensuring a safe learning environment for students and staff, but also helps to support optimal academic performance and achievement.

Our school buildings are much more than a passive container of the educational process; they are a vital component in the successful education of 21st-century learners.

Montgomery County Public Schools comprises 210 schools that total more than 26 million square feet, including 550 relocatable classroom structures, and 24 support facilities. The current enrollment of more than 160,000 students is projected to continue increasing in the years to come.

A solid, purposefully-implemented plan provides our stakeholders comfort and confidence in future facility planning and fiscally responsible decision-making. Experience at the local, state, and national levels suggests that effective school facility maintenance planning can significantly contribute to an organization's instructional effectiveness and financial well-being by the following measures:

- » Improving the cleanliness, orderliness, and safety of an organization's facilities;
- » Reducing the operational costs and the overall life-cycle cost of a building;
- » Helping staff identify facility needs and priorities proactively rather than reactively;
- » Extending the useful life of buildings; and
- » Increasing energy efficiency and lowering the carbon footprint of the organization.

In this Comprehensive Maintenance Plan (CMP), the Division of Maintenance and Operations (DMO) provides an overview of MCPS' facilities maintenance program and its delivery of physical environments that are safe, secure, accessible, well illuminated, well-ventilated, and aesthetically pleasing. In addition to answering the specific questions posed by the Interagency Commission on School Construction (IAC), this plan details the school system's organizational structure, services provided, operational procedures, future initiatives, and a list of facilities.

As the Department of Facilities Management and DMO continue to implement plans that were set forth during the 2020 departmental reorganization, each future edition of the CMP will continuously become more robust.

THE DIVISION OF MAINTENANCE AND OPERATIONS

The Division of Maintenance and Operations (DMO) was formed in 2020 when the Maintenance and School Plant Operations divisions were merged to create one cohesive unit. Collaborative teams, based out of three regional service centers and one specialty service center, work together to ensure reliable building infrastructures and systems that provide safe, productive, working environments.

DMO's dedicated staff works to sustain high-quality, clean, safe, and healthy learning environments for students and staff. Division support includes—

- » developing budgets and operational procedures, providing technical support, data analysis, and other administrative services,
- » managing centrally-based maintenance and operations services,
- » allocating staff and providing training,
- » establishing and executing a deferred maintenance plan,
- » managing and reducing the maintenance and repair backlog,
- » coordinating and integrating maintenance and operations activities on-site with other facilities, and
- » providing human resources services.

OBJECTIVES FOR THE DIVISION

All maintenance and operations activities are performed with student success in mind. Each fiscal year, operating within budgetary constraints and utilizing the maintenance plan and other related documents as the framework, DMO works in conjunction with other Department of Facilities Management (DFM) entities and service providers to accomplish the following broad objectives:

- » Provide maintenance and repair services to schools in a timely manner while keeping principals and managers informed of the status of their requests.

- » Develop budget plans after receiving input from principals/ administrators and assessments from maintenance staff.
- » Initiate work activities through corrective and preventive maintenance.
- » Provide an equitable environment where the diversity of the workplace is upheld in a culture of respect.
- » Fill vacancies in the division with qualified candidates who reflect the diversity of the community.
- » Provide appropriate training to sustain and enhance the skills of DMO staff relative to safety, new technologies, and leadership.
- » Conduct semi-annual roof inspections and complete related repairs in a timely fashion.
- » Create healthy, safe working environments that foster a culture of respect, boost morale, and increase productivity.
- » Conduct annual life safety, elevator, and lift inspections, and complete related repairs in a timely fashion.

FUNCTIONS OF THE DIVISION

MAINTENANCE AND REPAIR

Staff members perform a wide variety of maintenance and repair services and the division is expanding its preventative maintenance services. Repairs to building components and systems include heating, ventilation, air conditioning and refrigeration (HVAC-R), electrical systems, plumbing, and carpentry. General maintenance services include grounds maintenance, playground equipment repair, graffiti removal, hauling and excavation, tree trimming, and other services. Centralized preventive maintenance teams perform crucial PM tasks at all MCPS locations.

OPERATIONAL SUPPORT

The division's operations staff manages the overall budget for site-based building service (custodial) staff. This includes staffing allocations, standard operational procedures, supply and equipment procurement, and training. In close collaboration with maintenance staff, operations provides full customer service support to assigned facilities. This support includes providing substitute building service staff and assisting administration with operations-related needs. Because building services and maintenance are part of the same division, small repairs can be done on-site by skilled building service managers or PM workers, eliminating some of the wait time created by the work order process.

TRAINING AND DEVELOPMENT

Because it is committed to continuous professional development, the division promotes learning experiences that align with MCPS's seven core competencies. DMO's goal is to build the capacity of our workforce on behalf of students and to promote a culture of respect for all. Professional development for staff at all levels is a high priority for the division even though the priority focus for training may shift from year to year. For example, in FY21 the focus was on ensuring that all staff were properly trained on the methods of cleaning and disinfecting. In FY22, the focus shifted to technology and teaching both maintenance and operations employees how to use the new work order management system. While tradespeople and custodial staff use Asset Essentials (AE) in very different ways, they all must understand how to use the system effectively. All technicians, office staff, building service managers, and building service assistant managers were provided with AE training before the system rollout. In FY23, the training priority will shift to focus on personal development and improved customer service.

BUILDING AUTOMATED SYSTEMS

The Building Automated Systems unit operates, maintains, and manages programmed upgrades for computerized controls for heating and cooling systems in 92% of MCPS facilities. They support DMO service centers by inspecting systems and recommending repairs. Staff members in this unit also collaborate with the Division of Design and Construction for the selection, installation, and commissioning of energy management equipment in new and modernized facilities.



MAINTENANCE AND OPERATIONS SERVICE CENTERS

THREE REGIONAL CENTERS

Because Montgomery County covers more than 500 square miles, it is vital that our service centers be located regionally. This helps facilitate a faster response time and eliminate resources being wasted in travel and traffic. Each of our three regional service centers house both maintenance and operations activities and serve an average of 75 facilities. Managers and assistant managers work collaboratively to ensure the quality of the work performed in the various trade shops. Each shop has a supervisor and assistant supervisor that provide hands on management of work orders.

An assortment of maintenance activities fall under the banner of the **CARPENTRY SHOP** including windows, glass, floor coverings, lockers, doors, locks and keys, painting, roofing, handrails, ramps, and special-cut ceiling tiles.

The **ELECTRICIANS** install and service breakers, panels, switches, outlets, electric cook stoves, emergency lights, generators, and parking lot lights.

The **GENERAL MAINTENANCE SHOP** excavates, provides, hauling and trash removal services, repairs asphalt and concrete, maintains playgrounds, mows fields, trims trees and bushes, and plows the snow.

HVAC-R SHOP technicians repair boilers, chillers, cooling towers, circulation pumps, heat pumps, window air conditioners, refrigerators, and ice makers.

The **OPERATIONS MANAGERS** provide staffing, training, and other related support to site-based building service teams. A team of roving building service staff, assigned to each service center, provide temporary coverage for school-based staff to help avoid lapses in service.

PLUMBING SHOP technicians repair drains, drinking fountains, gas-fired stoves, toilets, showers, and more.

The site-based **PREVENTIVE MAINTENANCE** team members are primarily dedicated to filter and ceiling tile changes, providing routine service for all mechanical systems, and inspecting rooftops and grounds. They also perform minor repairs when necessary.

ONE CENTRALIZED CENTER

Our Central M&O Service Center houses the specialty trade shops that provide services for all facilities. It is located in Gaithersburg, where the division is headquartered, and serves as the centralized place where leadership and regional meetings, trainings, skills testings, interviewing, and other activities are held. A new warehouse is being created at this site as a cost-saving measure.

ELECTRONIC SHOP technicians repair fire alarms, security alarms, school bell systems, public address systems, two-way radios, and audio/visual equipment.

The **FACILITIES IMPROVEMENT TEAM (FIT)** specializes in mold remediation and other HVAC-related issues. FIT will be expanded to include technicians from the various trades who will work at schools after hours performing tasks that cannot be done while the facility is occupied.

Technicians in the **HEAVY EQUIPMENT SHOP** maintain and repair tractors, lawn mowers, trimmers, snow-blowers, and other pieces of equipment. This team also provides hillside mowing services for the schools.

The **INDUSTRIAL EQUIPMENT REPAIR** technicians work on kilns, rebuild motors, repair printing presses and trash compactors, and perform in-kind replacements. This team also performs line painting in parking lots.

Maintenance and repair of projection screens, stage curtains, upholstery, window blinds, ceramic tile, and even masonry are handled by the **MATERIALS FABRICATION AND RIGGING SHOP** technicians.

INTRODUCTION AND SUPPORTING INFORMATION

GUIDING PRINCIPLES

The core values and guiding principles of Montgomery County Public Schools (MCPS) shape everything that is done throughout the school system. This includes how students are taught, how colleagues work together, and how the facilities maintenance and improvement activities are planned and implemented. Those core values and principles are —

LEARNING

We believe that we must engage every student, every day; learning is achieved by cultivating curiosity and encouraging determination, focus, and hard work; and adult learning and engagement are key to student learning.

RELATIONSHIPS

We believe that meaningful collaboration is vital to our success; strong partnerships are built on trust and open and honest communication; and building relationships with our diverse community requires us to understand the perspectives and experiences of others.

RESPECT

We believe that each individual's contributions add value to our learning community; fair treatment, honesty, openness, and integrity are essential; and the diversity of our culture, interests, skills, and backgrounds is an asset that makes us stronger.

EXCELLENCE

We believe that raising the bar and setting high standards is necessary to ensure that all students graduate ready

for college and career; we have to expect the best to get the best from everyone, every day; and creating intellectual excitement and supporting personal growth inspires us all toward excellence.

EQUITY

We believe that each and every student matters; outcomes should not be predictable by race, ethnicity, or socioeconomic status; equity demands the elimination of all gaps; and creating and maximizing future opportunities for students and staff is necessary.



VISION

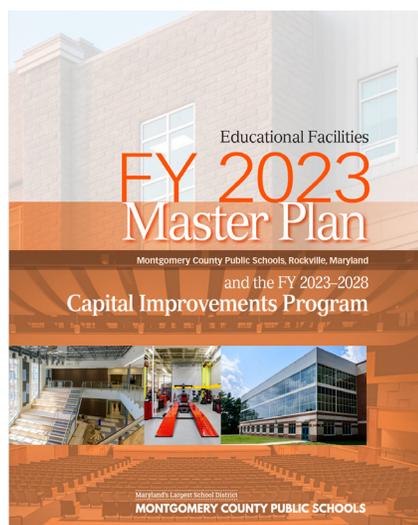
The vision of the Division of Maintenance and Operations is to be a model of excellence, continuous improvement, and innovation that is nationally recognized as a leader in K-12 maintenance and operations services.

MISSION

The DMO mission is to provide a full range of maintenance and operations services that exceed customer expectations while continuing to foster long-term relationships, establishing a highly-skilled workforce, and building recognition as leaders in the K-12 industry.

INTER-RELATIONSHIPS

The MCPS Superintendent's Recommended Capital Budget and Capital Improvements Program provides guidance for the work of the Department of Facilities Management. All four divisions within the department work collaboratively to ensure that construction, maintenance, and other functions are performed in alignment with the master plan.



STRATEGIC FOCUS FOR THE DIVISION

The strategic focus for the division is intentionally aligned with the MCPS Strategic Plan. The goals for professional and operational excellence apply not only to the educational side, but also to facilities management. The strategic focus is to—

- » Increase professional learning for all DMO staff and to increase the capacity of our workforce,
- » Improve the strategic recruitment strategy to hire highly-qualified, diverse staff,
- » Increase connectivity, productivity, and satisfaction with the use of technology, and to
- » Continue to maintain safe and clean facilities that ensure accessibility and support the learning environment.

LONG-TERM MAINTENANCE STRATEGY

The MCPS Board of Education, the superintendent of schools, and the school community recognize the necessity of maintaining schools in good condition. To maintain and extend the useful life of school facilities, a continuum of activities begins the first day a new school opens. This occurs through activities that range from routine maintenance to the systematic replacement of building systems. Through the implementation of this preventive maintenance strategy, MCPS can proactively maintain and troubleshoot critical assets.

Because schools built or modernized since 1985 are generally of higher construction quality than schools built prior to that year, it is possible to extend the useful life of equipment and systems through a high level of maintenance and replacement of building systems. In the coming years, more funds will be directed to major capital projects that sustain and upgrade facilities in good condition for longer periods than has been feasible in the past.

NEAR-TERM MAINTENANCE STRATEGY

As schools age, they are placed on a maintenance and repair ladder, moving from minor repairs to outright replacement of major systems. Capital improvement, PLAR (planned life-cycle asset replacement) and countywide projects that focus on roof replacements and mechanical system rehabilitations are essential to the preservation of the school systems' infrastructure.

COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

For the past two decades, Montgomery County Public Schools used Maximo as its computerized maintenance management system (CMMS) of choice. This system was primarily used for submitting and tracking work orders and managing assets in our facilities. Over the years, the needs of MCPS changed, and the primary focus has switched from simply providing maintenance service upon request to a more holistic approach that also includes predictive and preventive maintenance. There are several key reasons why DFM decided to move to a CMMS that will allow for better alignment of our maintenance functions. The expected positive outcomes include –

- » reduced risk of critical system failure,
- » a decrease in emergency repairs, outages, and response requirements,
- » increased customer satisfaction,
- » more effective preventive and corrective maintenance activities, and
- » a reduction in the overall lifecycle costs of our assets.

In a nutshell, we expect to see improved response time, better reporting, enhanced data utilization, and a more standardized, comprehensive preventive maintenance program. We also expect that after the initial transition period, system users will appreciate the enhanced features and how easily the new system can be navigated.

The selection process began in March 2021 when an independent consultant was hired to assist with the selection process of the new CMMS. In response to our published request for proposals, four firms were interviewed. The various features of their CMMS offerings were explored, their suggestions for training MCPS staff and transitioning from Maximo to the new system were reviewed, and numerous other factors were considered before Asset Essentials by Dude Solutions (now Brightly) was selected. The project was approved by the MCPS Board of Education in September, and after two months of MCPS's procurement and legal teams hashing out details, we were ready to get this massive project started.

In December 2021, the CMMS Project team began working with the team at Dude Solutions to finalize the interfaces that would be required. Because this system would be utilized by all four divisions of DFM, staff from each entity served as key project contributors. This collaboration helped to ensure that each division's needs will be met by the new system. Many of the features requested were designed to provide answers to the specific questions asked by the Interagency Commission on School Construction (IAC) for this very



document. By April 2022, the project team had been trained and began testing the system. After three months of testing and tweaking, MCPS's AE platform was ready to go live.

Because the pandemic impacted the delivery of mobile devices, the AE launch was delayed from July to August. In preparation for the rollout, DFM users participated in assorted training classes that were held. Each group of users attended a class that was specifically designed to meet their individual job functions. For example, building service managers only need to learn how to create and search for service requests while our maintenance technicians must know how to navigate AE, complete work orders, upload images, and rack their labor and materials used. All employees must receive AE training before gaining access to the system.

In the first week of use, more than 2,500 requests for service were processed through AE with the majority of requests being sent via the new DFM call center and the AE interface. School-based staff members are also taking advantage of the easy-to-use Google Form and email options to make requests.

Asset Essentials

The potential impact of the successful implementation of AE cannot be understated. For example, a minor improvement to a process that saves each DMO associate a mere five minutes out of each day will result in a labor time savings of more than 7,000 hours per year, providing the division with tremendous savings.

This system will allow for a better alignment of all maintenance functions, facilitating several positive outcomes including reduced risk of failure of critical systems; decreased emergency repairs, outages, and response requirements; increased stakeholder satisfaction - externally and internally; more effective corrective and preventative maintenance efforts; and reduced overall life cycle costs for assets.

We also expect AE to help provide streamlined communications for service technicians and maintenance personnel in real time. We expect to experience benefits that range from improved response time and enriched data utilization to more accurate projections for asset repair and end-of-life dates.

QUALITY ASSURANCE

Internal inspections and assessments are critical to any successful maintenance and operations program. Unfortunately, due to budgetary and staffing limitations, internal facility assessments are not being conducted by DMO personnel. Because regular inspections are a vital component of an efficient, high-functioning facility, the division has near-term plans to begin using contracted vendors to perform regular inspections during this fiscal year. Many elements of the periodic facility assessments performed by inspectors from the Interagency Commission on School Construction (IAC) will factor into the inspection requirements by the selected contractor(s).

A significant element of the division's near-term strategic focus is the expansion of the Quality Assurance (QA) team. This team, created in FY23 and composed of a manager and one data specialist, oversees compliance-related activities, state inspections, and roof and elevator inspections. The FIT team works in conjunction with the QA team to ensure that all deficiencies are remediated in a timely manner.

In the near future, the QA team will work with contractors to estimate the remaining useful life of all major building systems by utilizing the facility condition index (FCI) as a metric to quantify and evaluate the current condition of a facility and to benchmark comparisons to other similar facilities. The intent of the facility assessment process is to provide the information necessary to maintain facilities better and to provide essential information for developing a strategic plan for maintenance and replacements. Creating a method for internal facility assessments is a priority for the QA team and a module for inspections is being built into the new CMMS.

The long-term plan for the QA team includes a hybrid of employee and contractor services to support the division's needs and a robust second shift maintenance team of tradespeople who will continue projects begun during the day and perform tasks that cannot be done while facilities are occupied.



FACILITY OUTCOMES

FACILITY USABILITY

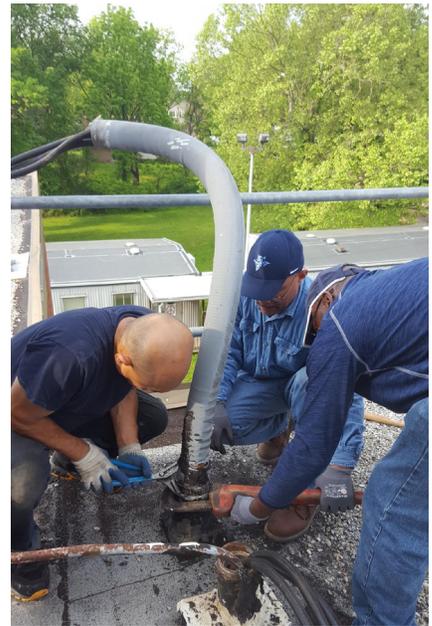
It is the practice of Montgomery County Public Schools to keep all facilities in a state suitable for use unless the facility is being renovated or demolished. Holding centers are utilized as temporary school locations while construction is in progress. The goal is to continue to keep each MCPS facility in a state where it can be used at any time by schools, offices, or community members.

On rare occasions, a school may be forced to close due to a full power outage, a water main break, or another plumbing issue. In FY22, one school was required to close early due to a sprinkler malfunction. This resulted in the facility being unusable for half of a school day.

PREVENTIVE MAINTENANCE

Due to the unique impact and challenges caused by the pandemic, the increased workload surrounding ventilation issues necessitated the use of HVAC contractors. They were used for service, repair, and installation of mechanical systems to ensure that the systems were functional and ready for the return of students and staff. Work was done in all areas including small terminal equipment and rooftop systems, and to execute other tasks that could be completed by MCPS personnel. The amount spent on preventive maintenance work done by contractors during FY 2022 was \$461,913.

A high percentage (85%) of our regularly-scheduled preventive maintenance (PM) activities are automatically generated by the system. Last year, 7,398 PM-related work orders were opened; 39% of which were closed within 30 days. It is important to note that because PM work orders are not entered for specific short-range time frames they are not expected to be completed within 30 days. In FY 2022, maintenance staff logged 17,094 hours performing preventive maintenance tasks for a total cost of \$549,380. It should be noted that site-based PM team members now perform many of the tasks that were previously cared for by maintenance technicians. Sixty-six PM technicians and specialists work full-time performing these tasks, but their hours are not included in the total for the year.



Our PM tasks include, but are not limited to the following:

- » Quarterly filter changes;
- » Routine water treatment;
- » Bi-annual roof inspections;
- » Winterization and de-winterization activities;
- » Annual kitchen hood cleaning and bi-annual inspection of hood suppression systems;
- » Annual service of air compressors, chillers, generators, and refrigeration equipment;
- » Annual testing of fire alarms, fire extinguishers, and sprinklers;
- » Annual geo-exchange bacteria testing;
- » Annual backflow preventer inspections; and
- » Annual inspections of portable classrooms.

PREVENTIVE MAINTENANCE continued

A major accomplishment in FY21 was the implementation of a new preventive maintenance team. Plant equipment operators who were previously part of the school-based building services teams at secondary schools, were centralized to form a team solely dedicated to preventive maintenance work. This minor adjustment to the position title allows the PM team members to dedicate 100 percent of their workday to vital preventive maintenance tasks.

The primary goal for this change in structure was to ensure that all MCPS facilities receive dedicated preventive maintenance care at least one day each week. Team members assigned to a high school work at that location four days a week and spend one day at their assigned elementary school. Those assigned to middle schools spend two days at that home base and care for elementary schools the rest of the week. This schedule provides equitable coverage for all locations. Six PM team leads serve as regional field leads for the PM team members. In the years to come, DMO leadership expects to see a major improvement in all metrics that involve preventive maintenance.

Under the direction of a regional operations manager, PM team members are routinely provided with technical training to enhance their capabilities.

CORRECTIVE MAINTENANCE

The majority of maintenance activities continue to fall into the category of corrective maintenance (CM). The present workflow and personnel numbers determine that the division functions in a purely reactive mode, fixing problems as they occur. In FY 2022, 72,231 CM work orders were opened; 63% of which were closed within 30 days. The majority (93.6%) of work orders were classified as routine requests while 3.67% were deemed urgent, and 2.73% were categorized as emergency calls.

On average, corrective maintenance work orders were closed within 30 days, a 3-day improvement over the FY21 average of 33 days. This improvement aligns with the division's stated goal of improving efficiency and decreasing response time by 10% each year so that by FY 2025, work orders will be closed within 20 days on average. In FY 2022, the total dollars spent on CM completed by DMO staff was \$8,343,560 while the total dollars spent on CM completed by contractors was \$2,859,545.

BUILDING (CUSTODIAL) SERVICES

The building service worker (BSW) position is the entry-level position for all custodians. It is required that all building service staff successfully complete the BSW training program within their first six months of employment. In FY 2022, 147 new employees completed this hands-on training that covers the full scope of custodial work performed in our facilities. Each school has a building service manager and assistant manager who ensure that custodial services are always performed according to our set guidelines. A number of building service staff members also completed school safety and security training through our partnership with SafeSchools.

SAFESCHOOLS TRAINING MODULE	# EMPLOYEES TRAINED	
	FY2021	FY 2022
Bloodborne Pathogen Exposure Prevention	1,442	1,103
Hazard Communication	237	25
Ladder Safety	234	18
Personal Protective Equipment	216	12
Safety Data Sheets	222	20



PLANNED ACTIONS

PLANNED IMPROVEMENTS TO SYSTEMS AND PROCESSES

The most significant change in the division for FY23 is the new CMMS. The other major change, a new call center, is directly related to the implementation of Asset Essentials. School-based staff and community members are now able to contact one centralized office to request service, inquire about the status of a repair, or get general information about the Department of Facilities Management.

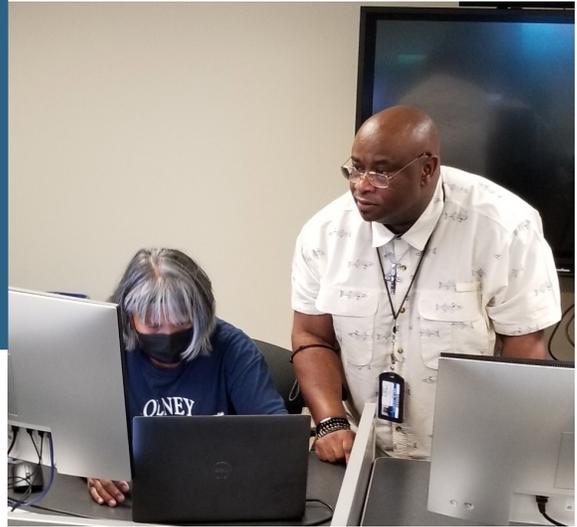
Based out of the DMO headquarters, the DFM Call Center technicians work on a rotating schedule from 6:00 a.m. to 4:30 p.m., Monday through Friday, ensuring that a human connection can be made quickly during the school day. School staff members are encouraged to make requests through their building service manager, but they are welcome to call, send an email, or complete a form if they desire.

A new operations assistant manager has been hired to create a functional warehouse where the most frequently-used maintenance-related items can be purchased in bulk, reducing replacement costs and standardizing products used by technicians.

From an operational point of view, FERN, the Facilities Employee Resource Network, is constantly being populated with resources to assist building service managers and all staff. All processes, policies, and procedures continue to be periodically reviewed and modified as necessary.

TRAINING AND PROFESSIONAL DEVELOPMENT

A new staff development position was created as the first step in implementing the plan for creating a robust training and development team for the division. At present, our training team is budgeted for two trainers and one staff development specialist who provide



training support for the more than 1,300 building service staff and nearly 500 technicians on DMO's staff.

Understanding that the need for professional development and skill-building opportunities is a critical element of success, the goal is to add a minimum of seven trainers to the team. They will help support schools by providing hands-on training in the field for those locations that need additional training.

The plan is to assign three dedicated trainers to each region to provide hands-on training in the field, providing support for schools that need additional learning opportunities to build the capacity of their building service workers, assistant manager, or building service manager.

Trainers will also provide hands-on trade and technology training for maintenance technicians to ensure that all team members are provided the support they need to be successful.

The near-term goal is for the division to have a well-rounded, diverse training team that focuses on career development and enhancing the knowledge, skills, and abilities of our DMO staff has been put into action. Staff development with clear career pathways and opportunities for growth are a major part of the planned initiatives for FY23 and beyond.

EXPANDING CURRENT INITIATIVES

The Quality Assurance (QA) team is being expanded to handle staff certifications, state inspections, facility and equipment inspections, facility improvement plans, safety compliance, water treatment, and other special projects. Our internal facility inspection program is currently being designed, loosely based on the facility assessments done by the Interagency Commission on School Construction (IAC). Division leadership believes that IAC's thorough inspection model provides an excellent blueprint for division assessments, which will occur at least once each year. The QA team will create plans for remediating deficiencies and the Facility Improvement Team (FIT) of skilled tradespersons will fix the issues.

Facility inspections are a crucial part of ensuring that quality service is being provided from maintenance and building services teams.

Our general maintenance team handles everything from removing bulk trash to building retaining walls and repairing blacktop. The plan is to create a dedicated grounds care team to ensure that all schools always have adequate curb appeal.

A robust team of second shift technicians will be able to perform work that cannot be completed while facilities are occupied. The plan is to expand the Facilities Improvement Team to include skilled

tradespeople. This will also allow work from the first shift to continue instead of that work being held over and completed the next day. The FIT expansion will save time and money, benefitting MCPS in multiple ways.

The DMO leadership team is continuously looking for ways to decrease the time between requests for service and completion of the work. Implementation of the new CMMS is an example of our progress and push forward.

The recent restructuring of the MST team reflects the direction of the division. This structure will be expanded to all shops and then cross over to building services as we look to insert a new building service worker II position into that career path.

PLANNED CAPITAL IMPROVEMENTS

With nearly 250 schools and facilities to care for, the list of capital improvements is always extensive. Information about these projects can be found in the 344-page Educational Facilities FY2023 Master Plan which includes the FY 2023-2028 Capital Improvements Program. Please visit <https://www.montgomeryschoolsmd.org/departments/planning/> to view this document. In FY 2022, major construction projects happened for the following facilities:

- » Burnt Mills Elementary School (replacement)
- » Clarksburg Elementary School #9 (new)
- » John F. Kennedy High School (addition)
- » A. Mario Loiederman Middle School (addition)
- » Ronald McNair Elementary School (addition)
- » Neelsville Middle School (replacement)
- » William Tyler Page Elementary School (addition)
- » Parkland Middle School (addition)
- » Odessa Shannon Middle School (addition)
- » South Lake Elementary School (major capital project)
- » Stonegate Elementary School (replacement)
- » Takoma Park Middle School (addition, complete)
- » Harriet R. Tubman Elementary School (new, complete)
- » Westbrook Elementary School (interior fit-out)
- » Woodlin Elementary School (replacement)
- » Charles W. Woodward High School (reopening)

OBSTACLES AND MISSING RESOURCES



When the Division of Maintenance and Operations was formed in 2020, one of the first steps in the restructuring process was to have a consultant review the entire maintenance program. Using the Capability Maturity Model (CMM) approach to organizational improvement, the consultant evaluated the current leadership and staffing structure and the functional responsibilities of each group with facility maintenance responsibilities. They assessed business needs and conducted a gap analysis to identify the steps, tools, and resources necessary for DMO to create the right alignment between the objectives of MCPS.

Their recommendations included key facility maintenance recommendations with specific details and realistic ways for DMO to develop a facility strategy, align that strategy with MCPS's strategic initiatives, improve business processes, optimize our maintenance structure, become more effective and efficient with its resources, and deliver on our organizational objectives. Items and initiatives that the consultant deemed as necessary but lacking are what are now viewed as missing resources.

Based on their recommendation, DMO is lacking customer service level agreements based on agreed, mutual expectations. This effort should include soliciting customers to determine their needs, developing service standards tied to an accepted prioritization scheme, measuring performance against customer expectations, and conducting routine visits to verify customer expectations are being met.

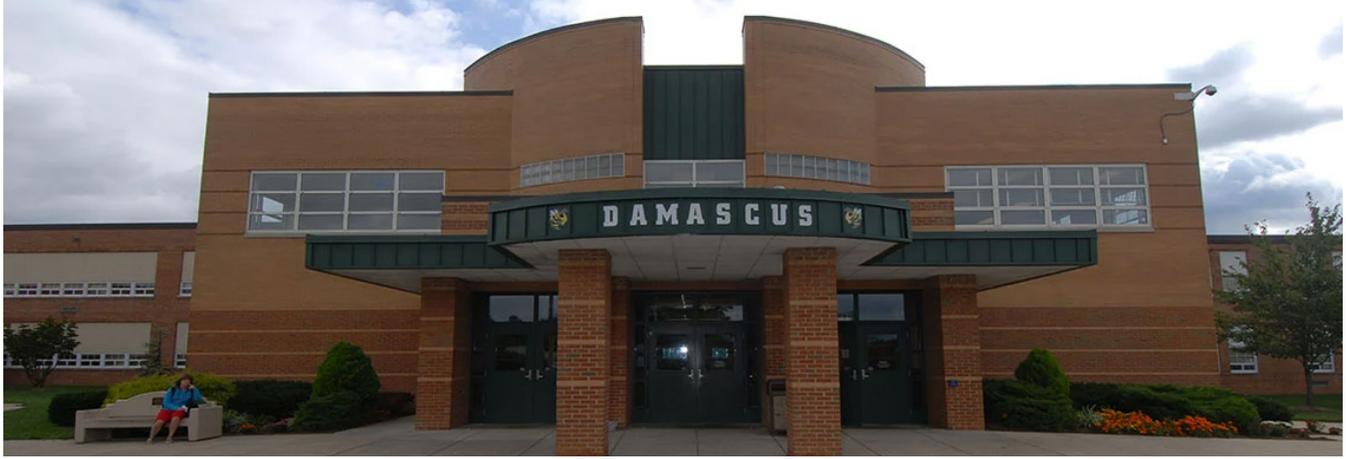
It was also suggested that DMO realign and train/retrain the workforce. This effort should include moving away from "job banding" and creating trade-based career pathways, defining career progression plans for trade, technician, and leadership positions, and establishing training or work activities to satisfy defined work competencies.

As with most other educational systems, the most relevant resource is the budget. The lack of funds is always the largest obstacle to reaching our goals. Due to the lack of funding, a great number of aged facilities and systems that need to be replaced must be deferred. Costly system upgrades are also often put on hold.

Lack of funding and budgetary cuts also impact the division when it comes to staffing. As the square footage total continues to increase each year, the number of custodial staff tends to get cut. This leads to fewer building service staff members being responsible for cleaning more space.

An obstacle, increased by the Covid-19 pandemic, is finding people who are willing to work in the lower-paid positions. Our building services and general maintenance teams are suffering greatly because their positions are unenticing.

These obstacles force us to be more creative with the resources that we have and to plan our work with efficiency in mind.



MCPs FACILITIES

ELEMENTARY SCHOOLS

Arcola , Silver Spring	Clarksburg	Garrett Park , Kensington
Ashburton , Bethesda	Clear Spring , Damascus	Georgian Forest , Silver Spring
Bannockburn , Bethesda	Clopper Mill , Germantown	Germantown
Lucy V. Barnsley , Rockville	Cloverly , Silver Spring	William B. Gibbs, Jr. , Germantown
Beall , Rockville	Cold Spring , Potomac	Glen Haven , Silver Spring
Bel Pre , Silver Spring	College Gardens , Rockville	Glenallan , Silver Spring
Bells Mill , Potomac	Cresthaven , Silver Spring	Goshen , Gaithersburg
Belmont , Olney	James Daly , Germantown	Great Seneca Creek , Germantown
Bethesda	Damascus	Greencastle , Silver Spring
Beverly Farms , Potomac	Darnestown , Gaithersburg	Greenwood , Brookeville
Bradley Hills , Bethesda	Diamond , Gaithersburg	Harmony Hills , Silver Spring
Brooke Grove , Olney	Dr. Charles Drew , Silver Spring	Highland , Silver Spring
Brookhaven , Rockville	DuFief , Gaithersburg	Highland View , Silver Spring
Brown Station , Gaithersburg	East Silver Spring , Silver Spring	Jackson Road , Silver Spring
Burning Tree , Bethesda	Fairland , Silver Spring	Jones Lane , Gaithersburg
Burnt Mills , Silver Spring	Fallsmead , Rockville	Kemp Mill , Silver Spring
Burtonsville	Farmland , Rockville	Kensington Parkwood , Kensington
Candlewood , Rockville	Fields Road , Gaithersburg	Lake Seneca , Germantown
Cannon Road , Silver Spring	Flower Hill , Gaithersburg	Lakewood , Rockville
Carderock Springs , Bethesda	Flower Valley , Rockville	Laytonsville , Gaithersburg
Rachel Carson , Gaithersburg	Forest Knolls , Silver Spring	JoAnn Leleck , Silver Spring
Cashell , Rockville	Fox Chapel , Germantown	Little Bennett , Clarksburg
Cedar Grove , Germantown	Gaithersburg	Luxmanor , Rockville
Chevy Chase	Galway , Silver Spring	Thurgood Marshall , Gaithersburg

ELEMENTARY SCHOOLS CONTINUED

Maryvale , Rockville	Rock Creek Forest , Chevy Chase	Summit Hall , Gaithersburg
Spark M. Matsunaga , Germantown	Rock Creek Valley , Rockville	Takoma Park
S. Christa McAuliffe , Germantown	Rock View , Kensington	Travilah , North Potomac
Ronald McNair , Germantown	Lois P. Rockwell , Damascus	Harriet R. Tubman , Gaithersburg
Meadow Hall , Rockville	Rolling Terrace , Takoma Park	Twinbrook , Rockville
Mill Creek Towne , Rockville	Rosemary Hills , Silver Spring	Viers Mill , Silver Spring
Monocacy , Dickerson	Rosemont , Gaithersburg	Washington Grove , Gaithersburg
Montgomery Knolls , Silver Spring	Bayard Rustin , Rockville	Waters Landing , Germantown
New Hampshire Estates , Silver Spg	Sequoyah , Derwood	Watkins Mill , Montgomery Village
Roscoe R. Nix , Silver Spring	Seven Locks , Bethesda	Wayside , Potomac
North Chevy Chase , Chevy Chase	Sherwood , Sandy Spring	Weller Road , Silver Spring
Oak View , Silver Spring	Sargent Shriver , Silver Spring	Westbrook , Bethesda
Oakland Terrace , Silver Spring	Flora M. Singer , Silver Spring	Westover , Silver Spring
Olney	Sligo Creek , Silver Spring	Wheaton Woods , Rockville
William Tyler Page , Silver Spring	Snowden Farm , Clarksburg	Whetstone , Gaithersburg
Pine Crest , Silver Spring	Somerset , Chevy Chase	Wilson Wims , Clarksburg
Piney Branch , Takoma Park	South Lake , Gaithersburg	Wood Acres , Bethesda
Poolesville	Stedwick , Montgomery Village	Woodfield , Gaithersburg
Potomc	Stone Mill , North Potomac	Woodlin , Silver Spring
Judith A. Resnik , Gaithersburg	Stonegate , Silver Spring	Wyngate , Bethesda
Dr. Sally K. Ride , Germantown	Strathmore , Silver Spring	
Ritchie Park , Rockville	Strawberry Knoll , Gaithersburg	

MIDDLE SCHOOLS

Argyle , Silver Spring	Gaithersburg	North Bethesda
John T. Baker , Damascus	Herbert Hoover , Potomac	Parkland , Rockville
Benjamin Banneker , Burtonsville	Francis Scott Key , Silver Spring	Rosa M. Parks , Olney
Briggs Chaney , Silver Spring	Dr. Martin L. King, Jr. , Germantown	John Poole , Poolesville
Cabin John , Potomac	Kingsview , Germantown	Thomas W. Pyle , Bethesda
Roberto W. Clemente , Germantown	Lakelands Park , Gaithersburg	Redland , Rockville
Eastern , Silver Sping	A. Mario Loiederman , Silver Spring	Ridgeview , Gaithersburg
William H. Farquhar , Olney	Montgomery Village	Rocky Hill , Clarksburg
Forest Oak , Gaithersburg	Neelsville , Germantown	Shady Grove , Gaithersburg
Robert Frost , Rockville	Newport Mill , Kensington	Odessa Shannon , Silver Spring

MIDDLE SCHOOLS CONTINUED

Silver Creek , Kensington	Tilden , Rockville	White Oak , Silver Spring
Silver Spring International	Hallie Wells , Clarksville	Earle B. Wood , Rockville
Sligo , Silver Spring	Julius West , Rockville	
Takoma Park , Silver Spring	Westland , Bethesda	

HIGH SCHOOLS

Bethesda-Chevy Chase , Bethesda	John F. Kennedy , Silver Spring	Rockville
Montgomery Blair , Silver Spring	Col. Zadok Magruder , Rockville	Seneca Valley , Germantown
James Hubert Blake , Silver Spring	Richard Montgomery , Rockville	Sherwood , Sandy Spring
Winston Churchill , Potomac	Northwest , Germantown	Springbrook , Silver Spring
Clarksburg	Northwood , Silver Spring	Watkins Mill , Gaithersburg
Thomas Edison Tech , Silver Spring	Paint Branch , Burtonsville	Wheaton , Silver Spring
Albert Einstein , Kensington	Poolesville	Walt Whitman , Bethesda
Gaithersburg	Quince Orchard , Gaithersburg	Thomas S. Wootton , Rockville
Walter Johnson , Bethesda		

SPECIAL SCHOOLS AND CENTERS

Lathrop E. Smith Environmental Education Center , Rockville
Stephen Knolls School , Kensington
Longview School , Germantown
John L. Gildner Regional Institute for Children and Adolescents , Rockville
Rock Terrace School , Rockville
Carl Sandburg Learning Center , Rockville
MacDonald Knolls Early Childhood Center , Silver Spring
Upcounty Early Childhood Center at Emory Grove , Gaithersburg



HOLDING CENTERS

Emory Grove, Gaithersburg

Fairland, Silver Spring

Grosvenor, Bethesda

North Lake, Rockville

Radnor, Bethesda

Tilden, Rockville



OFFICES AND OTHER

15 West Gude Drive, Rockville

45 West Gude Drive, Rockville

Carver Educational Services Center, Rockville

Concord Center, Bethesda

County Service Park, Rockville

English Manor School, Rockville

Food and Nutrition Services, Gaithersburg

Lincoln Center, Rockville

Lynbrook Center, Bethesda

Rocking Horse Road Center, Rockville

Spring Mill Offices, Silver Spring

Taylor Science Materials Center, Boyds

Upcounty Regional Services Center, Germantown



QUICK REFERENCE IAC Q&A SHEET



—■ indicates that the quick answer is provided here

→ points the reader to a more in-depth answer

A) INTRODUCTION AND SUPPORTING INFORMATION

1. Guiding Principles: A statement of the principles and/or values that guide the LEA's maintenance of its facilities.
→ See page 7
2. Vision: A description of the desired outcome/situation that its facilities-maintenance group is working to achieve.
→ See page 8
3. Mission: A statement of the mission of the LEA's facilities-maintenance organization/group/division/department.
→ See page 8
4. Interrelationships: A description of how the CMP interrelates with the LEA's Educational Facilities Master Plan (EFMP) and other relevant documents.
→ See page 8
5. A description of the long-term (strategic) focus of the LEA with regard to maintenance of its portfolio of facilities.
→ See page 8
6. A description of the near-term (next one to three fiscal years) focus of the LEA with regard to maintenance of its portfolio of facilities.
→ See page 8
7. Computerized Maintenance Management System (CMMS)
 - a. The name of the software package being used by the LEA to manage its maintenance.
—■ *Asset Essentials (AE) by Brightly, formerly Dude Solutions*

- b. A list of the CMMS modules or components being used and for what primary purposes.
 - *At present, we are using Work Orders and Assets for management and tracking purposes. We intend to begin using the Parts & Purchase Orders module by the end of the calendar year. Safety and inspection modules will be utilized in the future.*
- c. Whether or not the CMMS is being used to manage and track the work of contractors (non-LEA staff) engaged by the LEA to perform maintenance work.
 - *Yes, AE is being used to track work performed by contractors.*
- d. The percentage of preventive-maintenance work orders that are generated automatically within the CMMS pursuant to PM schedules entered into the CMMS.
 - *85% of PM work orders are auto-populated.*
- e. The percentage of facilities (active, holding, and administrative) for which all major building systems and components are tagged and entered into the asset inventory within the CMMS.
 - *At or close to 100%. An inventory assessment needs to be performed.*

8. Facilities-Assessment Process

- a. A brief description of how the LEA assesses its facilities (e.g., for condition, for educational sufficiency, etc.); how often it assesses them; and whether it uses in-house staff, contractors, or a combination of the two to implement the assessments (or whether the LEA simply relies upon the condition assessments performed by the IAC and/or the IAC's contractors). -
 - *At present, we are relying on IAC inspections to assess our facilities. However, by the end of the calendar year, our new facility assessment process, based on IAC's model, will be implemented.*
- b. A description of the current status of the LEA's facility assessments, if any.
 - *Not applicable.*

B) FACILITY OUTCOMES

The following elements are metrics that help to illuminate those key issues that can have an adverse impact upon life, safety, and/or health of facility occupants; upon teaching and learning; and/or upon the longevity of the facility. For each of the following metrics, provide a figure for the Previous FY Goal, the Previous FY Actual, and the Current FY Goal.

1. Facility Usability

- a. For each active or holding PK-12 school facility, the number of facility-days during which the facility could not support the delivery of the educational programs and services assigned to that facility and that are normally delivered in that facility.
 - *One half day at one facility in FY22. Our Superintendent is committed to providing MCPS students with an uninterrupted educational experience. DMO is also committed to that goal. An unavoidable sprinkler malfunction occurred at Lucy V. Barnsley Elementary School, forcing it to close early on a Friday. Maintenance and custodial crews worked through the weekend to ensure that the school could reopen on Monday morning.*

2. Maintenance (on an LEA-wide basis) Work Orders

a. Preventive Maintenance (PM)

- i. The total number of PM WO's opened.
—■ 7,398 for FY22
- ii. The percentage of PM WO's closed within 30 days.
—■ 39% for FY22
- iii. The total number of staff hours spent on PM work.
—■ 17,094 hours
- iv. The total number of contractor hours spent on PM work.
—■ *Information not available. Hours were not tracked in the old CMMS. Contractor labor is now being tracked in Asset Essentials.*
- v. The total dollars spent on PM work completed by staff.
—■ \$549,381
- vi. The total dollars spent on PM work completed by contractors.
—■ \$461,913
- vii. The percentage of all maintenance work hours spent on preventive maintenance.
—■ 6%

b. Corrective Maintenance (CM)

- i. The total number of CM WO's opened.
—■ 72,231
- ii. The percentage of CM WO's closed within 30 days.
—■ 63%
- iii. The percentage of CM WO's marked as Emergency or High Priority WO's.
—■ 6.4%
- iv. The total number of staff hours spent on CM work.
—■ 250,581 hours
- v. The total number of contractor hours spent on CM work.
—■ *Information not available. Hours were not tracked in the old CMMS. Contractor labor is now being tracked in Asset Essentials.*
- vi. The total dollars spent on CM work completed by staff.
—■ \$8,343,560
- vii. The total dollars spent on CM work completed by contractors.
—■ \$2,859,545
- viii. The mean time to repair the items for which a CM WO was opened.
—■ 30 days
- ix. The percentage of CM WO's entered by central-administration or non-building-level staff.
—■ 17%
- x. The percentage of CM WO's entered by building-level staff.
—■ 83%

3. Custodial

- a. The percentage of custodians trained on the LEA's Custodial Scope of Work during the last two fiscal years.
 - *100% of new employees are trained as part of the onboarding process.*
- b. The percentage of custodial duties completed adequately (as assessed through the LEA's selected method of assessment and against the LEA's selected standard).
 - *Building service (custodial) staff were not assessed by DMO in FY22. Custodial work will be evaluated as part of the Quality Assurance team assessments that will begin in the latter part of FY23.*

C) RESOURCES AND INPUTS

1. Maintenance Staffing and Organization

- a. Organizational chart for the current fiscal year for the LEA's maintenance and operations units.
 - ➔ *See Appendices A and B*
- b. List of positions by type and/or unit, with definitions; number of each type of position; number filled vs. vacant as of June 30 of the previous fiscal year (the fiscal year just completed).
 - ➔ *See Appendices C and D*

2. Summary of Current Staffing Against Industry Standards

	STAFFING METRIC	FY22 BUDGETED	FY22 ACTUAL	FY23 BUDGETED
A	Maintenance Staffing	397.5 FTEs	346.0 FTEs	391.0 FTEs
B	Maintenance Load *	66,627 per person	76,501 per person	67,696 per person
C	Percent of maintenance staff delivering service **	97.98% (359 of 369)	97.98% (359 of 369)	97.98% (359 of 369)
D	Custodial Staffing *	1,350.5	1,320	1,387.5
E	Custodial Load	19,611 per person	20,052 per person	19,077 per person

* Calculations based on square footage of 26,484,309

** All maintenance supervisors are considered "working" supervisors and are expected to deliver service to schools. The same rule applies to building service managers who provide custodial services.

3. Funding, Budgets, and Spending

- a. Budget Narrative: A brief description of the budget situation and context for the fiscal year.
 - *After years of budget freezes and little to no increase in funding, the division's budget narrative remains the same. The operational model from year to year is to "do more work with fewer resources." The division is doing all it can to remain effective under these conditions.*

b. Fiscal Summary (Enter a dollar figure for each box.)

FISCAL SUMMARY	INDUSTRY STANDARD	FY22 BUDGET	FY22 BUDGET PER GSF	FY22 ACTUAL	FY22 ACTUAL PER GSF	FY23 BUDGET	FY23 BUDGET PER GSF
SPENDING							
Preventive Maintenance	N/A	\$1,159,573	\$0.04	\$1,325,567	\$0.05	\$972,048	\$0.04
Corrective Maintenance	N/A	\$2,998,460	\$0.11	\$3,570,170	\$0.13	\$590,984	\$0.02
Deferred Maintenance	N/A	-	-	-	-	\$408,741	\$0.02
All Maintenance	CRV x .03	-	-	-	-	\$892,482	\$0.03
All Maintenance, per GSF	N/A	\$4,158,033	\$0.16	\$4,895,737	\$0.18	\$1,971,733	\$0.07
Operations	CRV x .01	-	-	-	-	-	-
Operations, per GSF	N/A	\$4,883,197	\$0.18	\$4,398,329	\$0.17	\$4,026,024	\$0.15
M&O Combined	CRV x .04	-	-	-	-	\$892,482	\$0.03
M&O Combined, per GSF	N/A	\$9,041,230	\$0.34	\$9,294,66	\$0.35	\$5,997,797	\$0.23

D) PLANNED ACTIONS

1. Changes: Description of how the LEA's planned approach to maintenance or maintenance activities are different from the past year, if applicable.
 - *Aside from placing an intentional focus on preventive maintenance, the division has not changed it's approach to maintenance and operations activities.*
2. List of Planned Improvements to Maintenance Structures/Systems and Maintenance Processes.
 - See Appendix E*
3. List of Planned Major (Capital) Maintenance and Repair Projects by Facility for Current FY and next FY. Make sure to cover all categories listed as Major Building Systems in the IAC's Statewide Facilities Assessment (SFA): Structural; Skin; Roofs; Interior Construction; Interior Doors & Hardware; Ceilings; Wall Finishes; Flooring; Conveyances; Plumbing Fixtures; HVAC; Electrical Distribution; Life/Safety Systems; Relocatables; Program Support Equipment; and Site.
 - *The Division of Maintenance and Operations does not manage Capital Projects. Please visit <https://www.montgomeryschoolsmd.org/departments/planning/cipmaster.aspx> to review the master plan.*
4. Professional Development (PD)
 - a. Describe the LEA's accomplishments.
 - *See page 13*
 - b. Describe the challenges that the LEA expects to face in the fiscal year at hand in relation to maintenance.
 - *See page 15*
 - c. Briefly describe the key components of the LEA's PD plan for the year at hand and attach a copy.
 - *See Appendix F*

E) OBSTACLES AND MISSING RESOURCES

1. Describe any missing resources and obstacles to implementing needed maintenance activities.
→ See page 25
2. Provide summaries of any relevant data sets included with the CMP.
→ None

APPENDICES

Optional: Summary of Current Staffing at the regional/cluster/grade-band/school-type levels against industry standards (as described in C.2 above).

- *Appendix A: FY2023 MCPS Leadership Structure*
- *Appendix B: FY2023 DMO Leadership Structure*
- *Appendix C: FY2023 DMO Operating Budget*
- *Appendix D: FY2022 End-of-Year Position Report*
- *Appendix E: FY2023 Planned PLAR*
- *Appendix E: FY2023 Training Opportunities for DMO Staff*

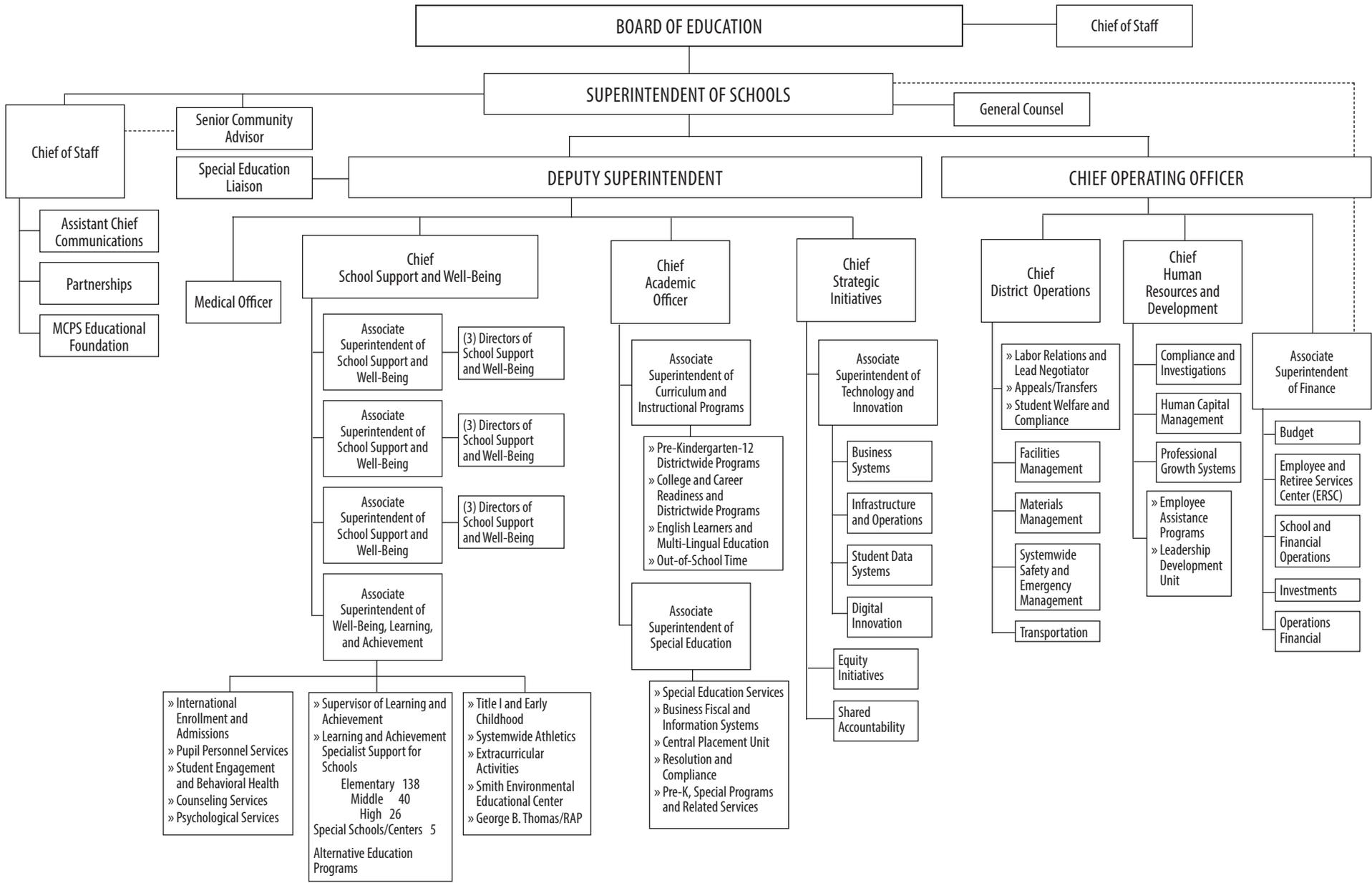


Montgomery County Public Schools
Department of Facilities Management
Division of Maintenance and Operations
8301 Turkey Thicket Drive
Building A, First Floor
Gaithersburg, MD 20879

240-740-2490

DMO@mcpsmd.org

FY 2023 MCPS LEADERSHIP STRUCTURE



**FY 2023
STRUCTURE**

ADMINISTRATION
 Veronica Hill, Director (P)
 (vacant), Asst. Project Manager (23)
 Tiona Rodgers, Data Support Specialist (21)
 Katherine Manzanares, Administrative Secretary I (15)

Roger Jenkins, Senior Manager (M)

(vacant), Senior Manager (M)

Samantha Harris, Senior Manager (M)

Sean Yarup, Senior Manager (M)

CENTRAL M&O SERVICE CENTER
 Jamie Duffy, Maintenance Manager (J)
 Brian Rice, Asst. Maintenance Manger (24)

*Building Automation Systems, Electronics,
 Heavy Equipment, Industrial Equipment,
 Material Fabrication, and Waste Removal*

DOWNCOUNTY M&O SERVICE CENTER
 Doug Jones, Maintenance Manager (J)
 Mike Horton, Asst. Maintenance Manager (24)
Carpentry, Electrical, HVAC-R, and Plumbing Shops

 Richard Dorsey, Operations Manager (J)
 Rosa Monterroso, Asst. Operations Manager (24)
*General Maintenance, Preventive Maintenance,
 Rovers, and Support for Site-based Staff*

MIDCOUNTY M&O SERVICE CENTER
 Joe Damaia, Maintenance Manager (J)
 Wayne Gregg, Asst. Maintenance Manager (24)
Carpentry, Electrical, HVAC-R, and Plumbing Shops

 Joseph Likambi, Operations Manager (J)
 Cordell Garrett, Asst. Operations Manager (24)
*General Maintenance, Preventive Maintenance,
 Rovers, and Support for Site-based Staff*

UPCOUNTY M&O SERVICE CENTER
 Kenneth Hagins, Maintenance Manager (J)
 Danny Sipple, Asst. Maintenance Manager (24)
Carpentry, Electrical, HVAC-R, and Plumbing Shops

 (vacant), Operations Manager (J)
 (vacant), Asst. Operations Manager (24)
*General Maintenance, Preventive Maintenance,
 Rovers, and Support for Site-based Staff*

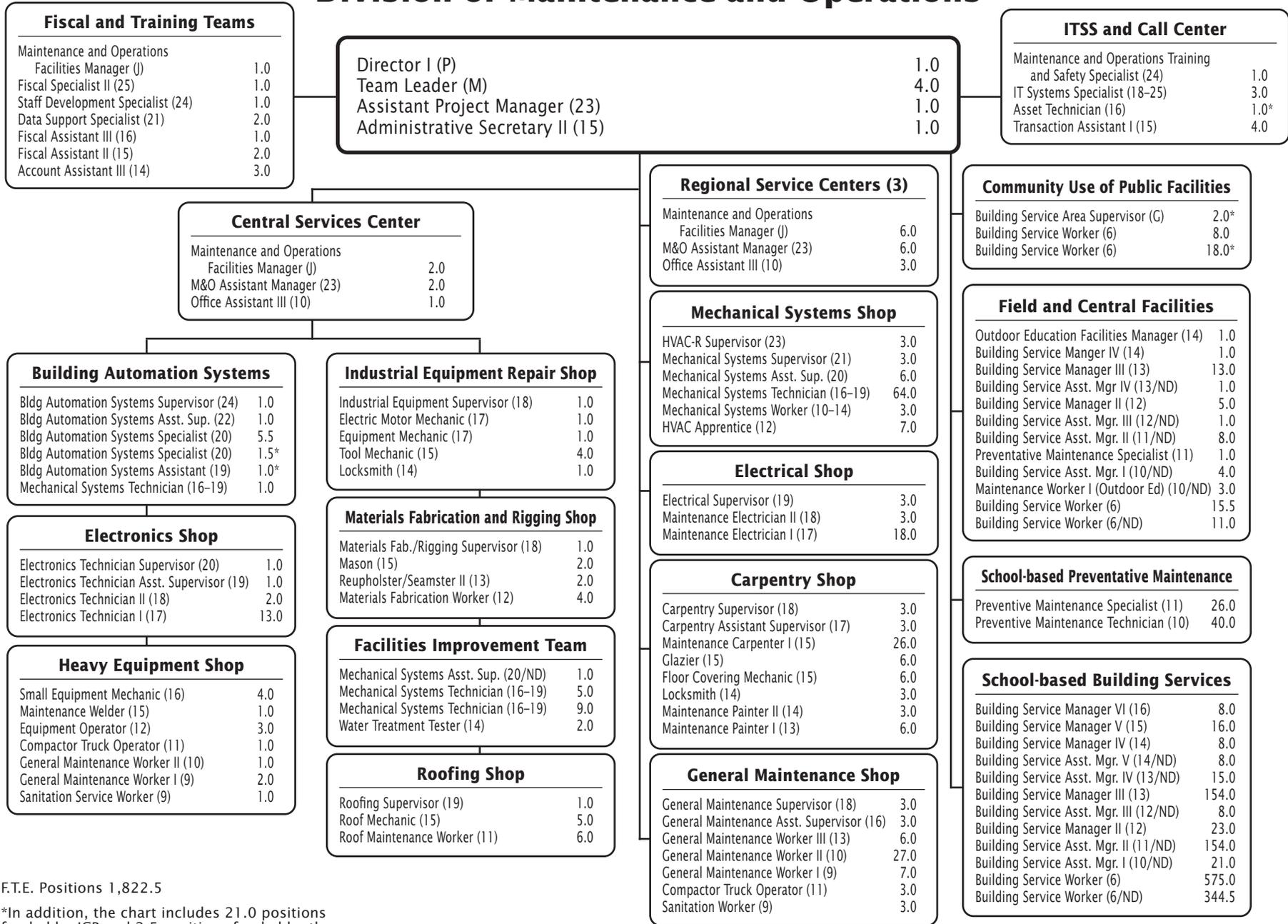
BUSINESS & OPERATIONS UNIT
 Libby Hillard, Business Manager (J)
 Ana Rivas, Fiscal Specialist II (25)
BUSINESS:
Fiscal and Training Teams

OPERATIONS:
 Yakubu Agbonselobho, Operations Manager (J)
 Luis Guardado, Operations Asst. Manager (24)
*Facilities Improvement Team and
 the DMO Warehouse*

ITSS and CALL CENTER

QUALITY ASSURANCE UNIT
*Staff Certifications, State Inspections,
 Facility and Equipment Inspections,
 Facility Improvement Plans, Safety Compliance,
 Water Treatment, and Special Projects*

Division of Maintenance and Operations



F.T.E. Positions 1,822.5

*In addition, the chart includes 21.0 positions funded by ICB and 2.5 positions funded by the Capital Improvements Program Budget

Night Differential (ND) = Shift 2

FY 2023 OPERATING BUDGET

POSITION	GRADE	OFFICE/SHOP	POSITION TYPE	FILLED	VACANT
Building Automation Systems Supervisor	24	BAS	Low-level management	1.0	0.0
Building Automation Systems Asst. Sup.	22	BAS	Low-level management	1.0	0.0
Carpentry Supervisor	18	Carpentry Shop	Low-level management	2.0	1.0
Carpentry Assistant Supervisor	17	Carpentry Shop	Low-level management	3.0	0.0
Electrical Supervisor	19	Electrical Shop	Low-level management	3.0	0.0
Electronics Supervisor	20	Electronics Shop	Low-level management	1.0	0.0
Electronics Assistant Supervisor	19	Electronics Shop	Low-level management	1.0	0.0
Material Fabrication Supervisor	18	Materials Fabrication Shop	Low-level management	1.0	0.0
Mechanical Systems Asst. Supervisor Sh 2	20	FIT	Low-level management	1.0	0.0
General Maint Central Supervisor	21	GM Shop	Low-level management	0.0	1.0
General Maint Area Supervisor	18	GM Shop	Low-level management	3.0	0.0
General Maintenance Assistant Supervisor	16	GM Shop	Low-level management	2.0	1.0
Industrial Equipment Supervisor	18	Industrial Equipment Shop	Low-level management	1.0	0.0
Mechanical Systems Supervisor	21	MST Shop	Low-level management	2.0	1.0
Mechanical Systems Asst Supervisor	20	MST Shop	Low-level management	6.0	0.0
Roofing Supervisor	19	Roofing Shop	Low-level management	1.0	0.0
Outdoor Education Facilities Manager	14	Field & Central Facilities	Low-level management	1.0	0.0
Building Service Manager IV	14	Field & Central Facilities	Low-level management	1.0	0.0
Building Service Manager III	13	Field & Central Facilities	Low-level management	13.0	1.0
Building Service Assistant Manager IV	13	Field & Central Facilities	Low-level management	1.0	0.0
Building Service Manager II	12	Field & Central Facilities	Low-level management	5.0	6.0
Building Service Assistant Manager III	12	Field & Central Facilities	Low-level management	1.0	0.0
Building Service Assistant Manager II	11	Field & Central Facilities	Low-level management	4.0	4.0
Building Service Assistant Manager I	10	Field & Central Facilities	Low-level management	3.0	1.0
Building Service Manager VI	16	School-based	Low-level management	8.0	0.0
Building Service Manager V	15	School-based	Low-level management	15.0	1.0
Building Service Manager IV	14	School-based	Low-level management	8.0	0.0
Building Service Assistant Manager V	14	School-based	Low-level management	8.0	0.0
Building Service Assistant Manager IV	13	School-based	Low-level management	15.0	0.0

POSITION	GRADE	OFFICE/SHOP	POSITION TYPE	FILLED	VACANT
Building Service Manager III	13	School-based	Low-level management	153.0	1.0
Building Service Assistant Manager III	12	School-based	Low-level management	8.0	0.0
Building Service Manager II	12	School-based	Low-level management	22.0	1.0
Building Service Assistant Manager II	11	School-based	Low-level management	141.0	13.0
Building Service Assistant Manager I	10	School-based	Low-level management	17.0	4.0
				1,686.0	173.5
<p><i>* This position to be abolished on June 30, 2022 and reconstituted effective July 1, 2022.</i></p> <p><i>** The MST shop underwent a restructuring/reclassification process at the end of FY22. MST-related vacancies were intentionally left unfilled until the new job codes/descriptions became active on July 1, 2022.</i></p> <p><i>*** While DMO manages the budget for building service costs, the division only manages the hiring of building service managers, assistant managers, and roving workers. School-based building service workers are hired by school administrators and Community Use of Public Facilities area supervisors.</i></p>					

Appendix K

Planned Life-cycle Asset Replacement (PLAR) Projects Completed Summer 2021

	Facility Name	Project Scope
1	Benjamin Banneker MS	Gym
2	Benjamin Banneker MS	Storage Shed
3	Benjamin Banneker MS	Switchgear Phase 1
4	Bannockburn ES	Elevator
5	Bannockburn ES	Gym Light Fixtures
6	Bannockburn ES	Gym floor
7	Bannockburn ES	Restroom
8	Lucy V. Barnsley ES	Fire Alarm
9	Beall ES	ADA Lifts 1 of 2
10	Bethesda ES	Generator
11	Montgomery Blair HS	Paint
12	James Hubert Blake HS	Floor
13	Briggs Chaney MS	Locks
14	Burning Tree ES	Ceiling and Lights
15	Burtonsville ES	Generator
16	Cabin John MS	Tennis Courts
17	Carver Educ. Services Center	Elevator
18	Clarksburg HS	Tennis Courts
19	Roberto W. Clemente MS	Floor Media Center
20	Cloverly ES	Doors
21	Damascus ES	ADA Lifts
22	Damascus ES	Ceiling and Lights
23	Damascus ES	Gym Lights
24	Diamond ES	PA System Upgrades
25	Eastern MS	Floor Media Center
26	Eastern MS	Lights
27	Eastern MS	Restroom
28	Emory Grove Center	Paint
29	Fairland Center	Paint
30	Fairland Center	Floor Covering
31	Forest Knolls ES	Generator
32	Fox Chapel ES	Delivery Ramp
33	Gaithersburg MS	Floor
34	Greencastle ES	Blinds
35	Greencastle ES	Windows
36	Highland ES	ADA Lifts
37	Jones Lane ES	Asphalt
38	Jones Lane ES	Exterior Wall
39	Spark M. Matsunaga ES	Wall
40	Midcounty Maintenance and Operations Service Center	Floor
41	Monocacy ES	Blinds
42	Monocacy ES	Windows
43	Richard Montgomery HS	Tennis Courts

	Facility Name	Project Scope
44	Pine Crest ES	Floor
45	Piney Branch ES	Doors
46	Piney Branch ES	Windows
47	John Poole MS	Paint
48	Quince Orchard HS	Bleachers
49	Quince Orchard HS	Gym Light Fixtures
50	Quince Orchard HS	Elevator
51	Quince Orchard HS	Gym Floor
52	Quince Orchard HS	Running Track
53	Judith A. Resnik ES	Floor
54	Rockville HS	Tennis Courts
55	Rocky Hill MS	Tennis Courts
56	Rosemary Hills ES	Gym
57	Rosemary Hills ES	Gym Light Fixtures
58	Rosemont ES	Floor
59	Sequoyah ES	Generator
60	Sherwood ES	Play Ground Equipment
61	Sherwood HS	Asphalt
62	Sherwood HS	Generator
63	Silver Spring International MS	Tennis Court
64	Sligo MS	Floor
65	Sligo MS	Generator
66	Sligo MS	Tennis Court
67	Smith Center	Paint
68	Strathmore ES	Re-keying
69	Strawberry Knoll ES	ADA Parking
70	Takoma Park MS	Paint
71	Waters Landing ES	Floor
72	Waters Landing ES	Exterior Wall
73	Watkins Mill ES	Exterior Lights
74	Watkins Mill ES	Sprinkler Project
75	Watkins Mill HS	Tennis Courts
76	Julius West MS	Fence
77	Westbrook ES	Play Area
78	Westland MS	Tennis Courts
79	Westover ES	Paint
80	Whetstone ES	Gym Lighting
81	Whetstone ES	Sprinkler Project
82	White Oak MS	Bleachers
83	White Oak MS	Exterior Wall
84	White Oak MS	Floor Media Center
85	Earle B. Wood MS	Tennis Courts
86	Woodfield ES	Paint

DRAFT

2023 Training Opportunities for DMO Staff

The Division of Maintenance and Operations (DMO) is committed to continuous professional development for our DMO staff, using the seven core competencies as a model. DMO's focus is to build the capacity of our workforce on behalf of students, achieve our equity goals, and promote a culture of respect for all. Here are a few professional learning opportunities offered to support our Division

Commitment to Excellence Series

During this 7-session series participants will gain an understanding of the Division of Maintenance and Operations (DMO) core values and how they align with MCPS. The Commitment to Excellence Series is centered on high expectations to achieve results based on job performance while living out DMO'S vision, mission, and achievements. This series is competence based focused.

Managing Personalities in the Workplace

Participants will be able to gain strategies and tools to support working with employees that have a hard time getting along with one another, including the supervisor. Participants will find during this DMO course that their personality could impact how the team functions. Participants will leave the course with additional strategies to support positive ways of interacting with their colleagues while working together as a team. This course is competency-based focused.

Evaluator Training

This DMO training has been specifically designed for Division of Maintenance and Operations (DMO) service center managers and supervisors who write evaluations for DMO staff. In this 2-hour session, participants will learn how to:

- recognize the four key components of performance feedback for DMO staff;
- identify and document behavioral examples that will support a finding of meeting (or not meeting) competency,
- match work sample data to core competencies,
- effectively use documentation as the basis of support for evaluations,
- role play scenarios to help support real-time situations that can occur during an in-person evaluation, and
- understand the Performance Improvement process (PIP) summary.

This training is competency-based focused.

Tools and Tips

This is an exciting DMO new resource. A shared strategy monthly by an exemplar DMO employee (s) from multiple shops to raise awareness on items that are working well in the shop by way of strategies that are being used to impact the Division of Maintenance of Operations positively. This can be shared in a monthly newsletter as an example. Tools and Tips can be competency-based focused.

Do You Know What Time it Is? Managing your Day, Managing Your Time

This effective DMO course focuses on providing participants with processes centered on organization, planning, and dividing their time between different work activities and work duties during the day so that being efficient and effective in completing duties happens. Participants will leave the training with a clearer outlook on why time management is important. This training is competency-based focused.

A Penny for your Thoughts Round Table Series

This periodic DMO series focuses on DMO employees meeting, sharing, collaborating, and celebrating accomplishments with their peers. The series also focuses on the importance of building healthy working relationships within the DMO community. This series is competency-based focused.

Resolving Conflict and Bridging Relationships

During this DMO course, participants that work closely with peers in their department shop will gain a new perspective based on gaining strategies that focus on viewing things differently than their own perspective when bridging relationships. Participants will have the opportunity to role-play and gain additional strategies so that assessing one's own behavior can be reflective instead of adversarial to ensure good teamwork in bridging positive relationships in the future. This training is competency-based focused.

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Basic Skills for Building Service Workers – 24 Course Hours

Session 1 (8 hours) Classroom Presentation

- Building Service Overview - discuss how building services support student success, customer service, and required mandatory training.
- Safety Training – discuss proper use of PPE, ladders, and chemicals
- Electrostatic Sprayer Training – teach participants how to safely and properly use the Victory Electrostatic Sprayer
- Interior Cleaning – overview of proper MCPS cleaning procedures, and overview of interior equipment.
- Exterior Grounds Care – overview of proper MCPS exterior grounds care responsibilities and outdoor equipment.

Session 2 (8 hours) Hands-on Interior Cleaning

- Restroom cleaning - discuss proper restroom cleaning procedures and allow participants to practice and demonstrate learned skills.
- Classroom cleaning – discuss proper classroom cleaning procedures and allow participants to practice and demonstrate learned skills.
- Floorcare – discuss the safe usage of floor care machines (stripper, carpet extractor, carpet bonnet, and vacuum) and allow participants to practice and demonstrate proper use of interior equipment.
- Hallway and staircase cleaning – provide an overview of routine/detailed cleaning of hallways and stairwells, and allow participants to practice and demonstrate learned skills.

Session 3 (8 hours) Hands-on Exterior Grounds Care & Final Test

- Building Security – discuss proper lock-up and security procedures. Participants walk around the building to check for security issues.
- Playground Inspections – discuss proper care of playground equipment and surfaces (mulch, check equipment for damage, and asphalt).
- Equipment Overview – discuss safe usage of exterior grounds equipment (lawnmowers, backpack blowers, walk-behinds, weed eaters, push blowers, etc.).
- Hands-on use of outdoor equipment – allows participants to practice and demonstrate proper use of all outdoor equipment.
- Basic Skills test – participants take the final cumulative test (50 multiple choice and T/F) and must pass this test with an 80%.

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Building Systems – 40 Course Hours

Session 1 (4 hours) Overview of Building Systems: This course provides an overview of the building systems operations course including the basic principles of boiler operations and boiler fittings.

Session 2 (4 hours) Hot Water Heating Systems: This course explores the basics of hot water heating systems and helps participants to gain an understanding of safely operating hot water systems and the basics of general boiler operations safety.

Session 3 (4 hours) Hands-on Hot Water Heating Systems Training: In this course, participants will receive hands-on training to allow them to understand and experience for themselves all the aspects of operating and maintaining a hot water heating system.

Session 4 (4 hours) Cooling Systems: In this course participants will learn to recognize and use equipment that makes up a cooling system. They will also learn about indoor air quality and mold prevention.

Session 5 (4 hours) Hands-on Cooling System: In this course, participants will get hands-on experience using the equipment that makes up a cooling system; including hand-on experience identifying all cooling system components.

Session 6 (4 hours) Operation of Air Handlers, Unit Ventilators, Energy Recovery Units, and Roof Units: In this course, participants will learn the basic principles of air handling systems including their operation and maintenance, the components of the systems, proper filter use, and maintenance, and maintaining belts and pulley systems

Session 7 (4 hours) Hands-on Air Handlers and Unit Ventilators: In this course participants will get hands-on experience opening, cleaning, changing filters, and lubricating air handlers, energy recovery units, and rooftop equipment.

Session 8 (4 hours) Hands-on Energy Recovery Units, Rooftop Equipment & Drains: In this course participants will get hands-on experience opening, cleaning, changing filters, and lubricating air handlers, energy recovery units, and rooftop equipment. They will also learn how to clean and service the roof drains and all other school drainage systems. Attendees will also learn how to clean and service the roof and all other school drainage systems.

Session 9 (4 hours) Geothermal Heating and Cooling: In this course, participants will learn the basics of Geothermal heating and cooling systems including how to locate, clean, and change filters used in a geothermal system.

Session 10 (4 hours) Plumbing, Electrical, and Carpentry for Building Services: In this course, participants will learn the basic responsibilities of operating generators. Learn to realize the importance of identifying the location of the annunciator panel, how to test and reset the fire alarm, other essential safety information needed for building service operations, and the basics of portable classrooms on campus.

Session 11 Final Review and Testing for Certification: This is a review of the course covering sections 6 - 15 and the administration of the final test.

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Supervisory Skills for DMO Employees – 24 Course Hours

(Replaces the Advanced Leadership course)

This course will prepare employees seeking supervisory positions within the Division of Maintenance and Operations to be successful as Building Service Supervisors. In this 4-session course, MCPS employees will learn the skills they need to supervise and lead their employees to ensure the successful building operation of their school. Each full-day session will be taught by the DMO training team members and MCPS content experts. Successful completion of all four sessions of this course is required for employees applying for the building service manager or the building services assistant manager position. This course may also be used as refresher training for supervisors who want to hone their skill set or require training in one or more specific areas.

SESSION 1 (8 hours) DMO Supervisory Skills Introductions: This session will overview a supervisor’s duties, professional responsibilities, and the MCPS seven core competencies. Topics explored include FERN, Safety & Proper Protective Equipment (PPE), Employee Training, Timesheets & Leave requests, creating a schedule, Using, Budgets, Ordering Supplies, and Using the CMMS work order system.

Competencies covered in this session: Knowledge of Job and Professionalism

SESSION 2 (8 hours) Effective Communication and Personnel Management: In this session, attendees will explore the purposes of communication; Identify three types of communication; Examine barriers to effective communication; Discuss three dimensions to any communication; Explain the importance of active listening in the communication process; Learn how to use constructive feedback and properly use email as a communication tool. Learn how the MCPS Evaluation process works and what a supervisor’s role is in the process. Learn how to observe employees and use proper documentation to help employees learn and grow.

Competencies covered in this session: Interpersonal and Communication

SESSION 3 (8 hours): Presentations from Content Experts

In this session, attendees will learn from content experts how the building operations team interacts and works with other areas in the organization, including the Division of Materials Management, Community Use/ICB, Air Quality and Mold Prevention, and Compliance and Sustainability as it relates to SERT and Asbestos Awareness.

Competencies covered in this session: Commitment to Students and Problem Solving

SESSION 4 (8 hours): Leadership and Team Building:

In this session, attendees will learn the leadership and organizational skills needed to build a professional team. They will look at what motivates employees and what does not. They will explore how to work through conflict, think and plan collaboratively, and learn how to work together to achieve goals. They will hear from successful professionals how they organize and lead their teams.

Competencies covered in this session: Professionalism and Organization